

### REMARKS/ARGUMENTS

Claims 1-39, 42, and 43 are pending in the application. Claims 1, 17, and 19-39 are amended, Claims 40 and 41 are canceled, and Claims 42 and 43 are added. The amendments to the claims as indicated herein do not add any new matter to this application.

#### CLAIM REJECTIONS—35 U.S.C. § 101

Claims 1-39 were rejected under 35 U.S.C. § 101.

Claims 1 and 17 have been amended to recite, among other features, “storing said second set of data in volatile memory or non-volatile memory.” The Applicants respectfully submit that Claims 1 and 17 each recite a useful, concrete and tangible result.

Claims 19-39 have been amended to recite, among other features, “a tangible volatile or tangible non-volatile machine-readable medium.” The Applicants respectfully submit that the amendments to Claims 19-39 remedy any deficiencies from which Claims 19-39 might have previously suffered under 35 U.S.C. § 101. Additionally, although the Office Action alleges, on page 3, that “Applicant’s specification at paragraph [0203] appears to categorize carrier waves as wither a storage device or non-volatile media,” the Applicants note that the specification contains no such paragraph; the last numbered paragraph in the specification is paragraph [0112].

For at least the above reasons, the Applicants respectfully request that the rejections of Claims 1-39 under 35 U.S.C. § 101 be withdrawn.

#### CLAIM REJECTIONS—35 U.S.C. § 112, FIRST PARAGRAPH

Claims 19-36 and 41 were rejected under 35 U.S.C. § 112, first paragraph. More specifically, the Office Action alleged that the terminology “computer-readable **storage** medium”

did not appear in the specification as filed. Claim 41 has been canceled. Claims 19-36 have been amended, and no longer recite “computer-readable storage medium.”

For at least the above reasons, the Applicants respectfully request that the rejections of Claims 19-36 under 35 U.S.C. § 112, first paragraph, be withdrawn.

CLAIM REJECTIONS—35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1-41 were rejected under 35 U.S.C. § 112, second paragraph. Claims 40 and 41 have been canceled.

The Office Action alleged that the phrase “a different one of the subsets of data,” which previously appeared in Claim 1, was unclear. As a result of the amendment to Claim 1, Claim 1 no longer recites this phrase.

The Office Action alleges that Claim 17 contained a “negative limitation” and therefore was ambiguous. The Applicants respectfully disagree, and note that the Office Action’s allegation that “the general rule in patent and contract law . . . is that negative limitations are inherently ambiguous” is without any basis in established rule or law. Furthermore, if it were true that a claim’s coverage of “an unlimited number of possibilities” caused that claim to be “unclear and/or overbroad,” as the Office Action alleges, then all open-ended claims (e.g., all claims that recited “a method **comprising**”) would be unclear and/or overbroad. Clearly, this is not the case.

It is abundantly clear to one of ordinary skill, who reads Claim 17, that if the “sorting” step is performed, then Claim 17 is **not** infringed, and, conversely, if the other recited steps are performed, but the “sorting” step is not performed, then Claim 17 **is** infringed. Thus, the public

is placed on notice as to what the Applicants regard as this embodiment of their invention.

Claim 17 is clear and non-ambiguous.

For at least the above reasons, the Applicants respectfully request that the rejections of Claims 1-39 under 35 U.S.C. § 112, second paragraph, be withdrawn.

CLAIM REJECTIONS—35 U.S.C. § 103

Claims 1-41 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,397,214 (“Rogers”) in view of U.S. Patent No. 6,298,342 (“Graefe”). Claims 40 and 41 have been canceled. The rejection of Claims 1-39 is respectfully traversed.

The Office Action admits that Rogers does not disclose “wherein the second set of data is dense relative to the first dimension” as recited in Claim 1. The Office Action alleges that Graefe discloses a table in which data is dense relative to a particular dimension. Apparently, the Office Action intends to show that Graefe’s table 430 is dense relative to some dimension, even if none of Rogers’ tables are.

However, one cannot combine the result of one process (i.e., Graefe’s) with the steps of another process (i.e., Rogers’) if the steps of the latter process (i.e., Rogers’) couldn’t produce the results of the former process (i.e., Graefe’s). Applying Rogers’ techniques to Graefe’s table 410 would not produce Graefe’s table 430. Even if a person of ordinary skill in the relevant art had Rogers’ teachings in hand, that person would **not** be able to figure out how to modify Rogers’ teachings in order to produce a densified table merely by seeing an example of an allegedly densified table in Graefe. Seeing a result does not automatically enable one to determine how to achieve that result.

The Office Action's reasoning appears to go as follows: Rogers' technique involves some steps that transform a set of tables into another table. However, that resulting table admittedly is not dense relative to any dimension. However, Graefe's figure shows a table that is (allegedly) dense relative to some dimension. Therefore, one could combine Graefe with Rogers to arrive at a technique that transforms a set of tables into a table that is (allegedly) dense relative to some dimension. This reasoning clearly contains some holes. The conclusion does not in any way logically follow from the premises preceding that conclusion.

Moreover, the Office Action alleges that the combination of Graefe and Rogers would have been obvious "because to do so provided a programmer with **an ANSI standard SQL mechanism for implementing an outer join**, as taught by Grafe in the Abstract." Graefe's Abstract teaches **no such thing**. Indeed, Graefe's technique does **not** provide a programmer with an ANSI standard SQL mechanism for implementing an outer join. Graefe's technique regards "pivoting" a table, not implementing an outer join.

Furthermore, even supposing that Rogers' tables (e.g., the tables in FIG. 1A) were "pivoted" using Graefe's technique, the resulting "pivoted" tables would still **not** be dense with respect to any dimension. Thus, even if Rogers' and Graefe's techniques could be combined somehow, the combination still would not result in the method of Claim 1.

Like Claim 1, Claim 17 also recites, among other features, "wherein the second set of data is dense relative to the first dimension." Claim 17 is patentable over Rogers and Graefe for at least the reasons discussed above in connection with Claim 1.

For at least the above reasons, the Applicants respectfully request that the rejections of Claims 1-39 under 35 U.S.C. § 103(a) be withdrawn.

## CONCLUSION

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.


The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

Hickman Palermo Truong & Becker LLP

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Christian A. Nicholes  
Reg. No. 50,266

2055 Gateway Place, Suite 550  
San Jose, California 95110-1089  
Telephone No.: (408) 414-1080  
Facsimile No.: (408) 414-1076